LISTING OF THE CLAIMS:

1. – 32. (Cancelled)

33. (Currently Amended) A method for coupling a signal radiation at wavelength λs, a first pump radiation at wavelength λp1 and a second pump radiation at wavelength λp2, comprising ~~the steps of~~:

providing (a) a first and a second port for receiving respectively the first and the second pump radiation, (b) a third port for the signal radiation and (c) a fourth port; and

combining the signal radiation, [[and]] the first pump radiation and the second pump radiation simultaneously in the fourth port through a reversal of the direction of propagation of the first pump radiation from the first port to the fourth port.

Please add the following new claims:

34. (New) The method of claim 33, wherein wavelength λp1 is different from wavelength λp2.

35. (New) A method of coupling radiation in a common coupling section, the method comprising:

receiving a first pump radiation at wavelength λp1 into a first port of the common coupling section;

receiving a second pump radiation at wavelength λp2 into a second port of the common coupling section;

receiving a signal radiation at wavelength λs into a third port of the common coupling section; and

combining the signal radiation, the first pump radiation and the second pump radiation simultaneously in a fourth port of the common coupling section through a reversal of the direction of propagation of the first pump radiation from the first port to the fourth port.

36. (New) The method of claim 35, wherein the common coupling section comprises:

a first optical path which connects the first and the second port; and

a second optical path, in communication with the first optical path, which connects the third and the fourth port, and it is adapted to send to the fourth port the first pump radiation, which propagates along the first optical path from the first port to the second port, making it pass from the first optical path to the second optical path and reflecting it back towards the fourth port.

37. (New) The method of claim 36, wherein the coupling section is also adapted to send to the fourth port the second pump radiation, which propagates along the first optical path from the second port towards the first port, making it pass from the first optical path to the second optical path.

38. (New) The method of claim 36, wherein the coupling section is also adapted to let the signal radiation propagate along the second optical path.

39. (New) The method of claim 36, wherein the first optical path comprises a waveguide.

40. (New) The method of claim 39, wherein the second optical path comprises a waveguide.

41. (New) The method of claim 40, wherein the first and the second optical path are coupled along a coupling area.

42. (New) The method of claim 41, wherein the coupling area is configured to let substantially all the power of the signal radiation at wavelength λs propagate along the second optical path, and to let substantially all the power of the first pump radiation at wavelength $\lambda p1$ and substantially all the power of the second pump radiation at wavelength $\lambda p2$ pass from the first optical path to the second optical path.

43. (New) The method of claim 42, wherein the first and the second optical path form a WDM optical coupler of the 100%λp1, λp2/0% λs type, comprising two waveguides coupled with one another in said coupling area.

44. (New) The method of claim 42, wherein said coupling section comprises an optical reflection element positioned in the coupling area of the first and the second optical path, adapted to reflect the first pump radiation at wavelength λp1 towards the fourth port and to let the second pump radiation at λp2 and the signal radiation at wavelength λs pass.

45. (New) The method of claim 44, wherein said optical reflection element is a Bragg grating.

46. (New) The method of claim 44, wherein said optical reflection element is positioned in a point of the coupling area at which about 50% of power of the first pump radiation passes from the first optical path to the second optical path.

47. (New) The method of claim 41, wherein the first and the second optical path are also coupled along a second coupling area.

48. (New) The method of claim 47, wherein the first and the second optical path comprise an input coupler, an output coupler, an upper arm and a lower arm, and wherein the input coupler has four ports of which two are the second and the third port of the coupling section, and two are in communication with the upper arm and the lower arm, and the output coupler has four ports of which two are the first and the fourth port of the coupling section, and two are in communication with the upper arm and the lower arm.

49. (New) The method of claim 34, wherein said coupling section comprises an optical reflection element adapted to reflect the first pump radiation at wavelength λp1 towards the fourth port, and to let the second pump radiation at wavelength λp2 and the signal radiation at wavelength λs pass.

50. (New) The method of claim 49, wherein said optical reflection element is a Bragg grating.

51. (New) The method of claim 49, wherein the coupling section also comprises a second optical reflection element adapted to reflect the first pump radiation at wavelength λp1 towards the fourth port, and to let the second pump radiation at wavelength λp2 and the signal radiation at wavelength λs pass.

52. (New) The method of claim 51, wherein the first and the second optical path comprise an input coupler, an output coupler, an upper arm and a lower arm, and wherein the input coupler has four ports of which two are the second and the third port of the coupling section, and two are in communication with the upper arm and the lower arm, and the output coupler has four ports of which two are the first and the fourth port of the coupling section, and two are in communication with the upper arm and the lower arm, and wherein the first optical reflection element is positioned in said upper arm and the second optical reflection element is positioned in said lower arm.

53. (New) The method of claim 52, wherein the input coupler and the output coupler are two WDM optical couplers of the 50%λp1, λp2/0% λs type, each comprising two waveguides coupled with one another in said first and said second coupling area.